

Wind and Solar Curtailment May 24, 2017

This report is produced daily to provide a detailed accounting of the wind and solar renewable generation that was curtailed and the reasons why¹. This report should be read in the context of the Renewables Watch report for a more complete understanding of both renewable curtailment and generation².

Wind and solar curtailments are grouped into the following categories:

1. Economic - Local: Market dispatch of generators with economic bids to mitigate local congestion³.
2. Economic - System: Market dispatch of generators with economic bids to mitigate system-wide oversupply⁴.
3. SelfSchCut - Local: Market dispatch of self-schedules to mitigate local congestion.
4. SelfSchCut - System: Market dispatch of self-schedules to mitigate system-wide oversupply.
5. ExDispatch - Local: Exceptional dispatch to mitigate local congestion.
6. ExDispatch - System: Exceptional dispatch to mitigate system-wide oversupply.

Note: Amounts smaller than 1 MW are filtered out for simplicity. Such small curtailments are occasionally observed when forecasts are lower than Pmin when market will de-commit the unit and send the 0 MW dispatch.

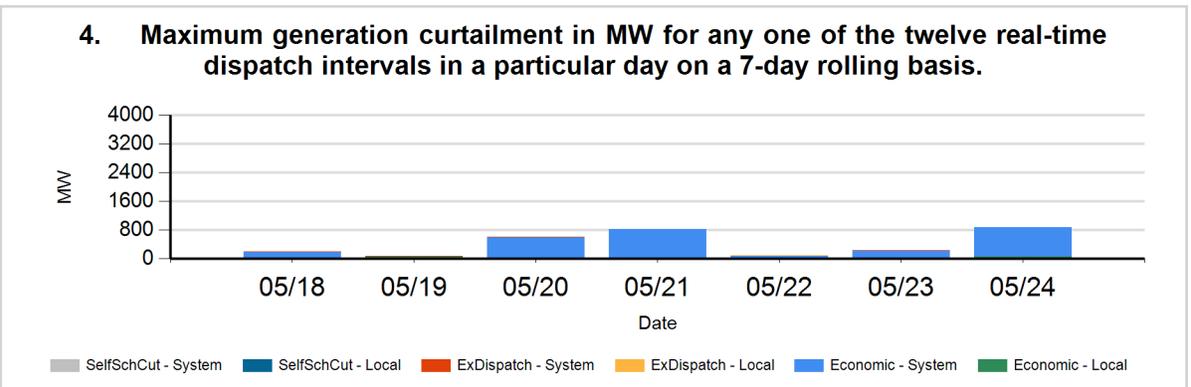
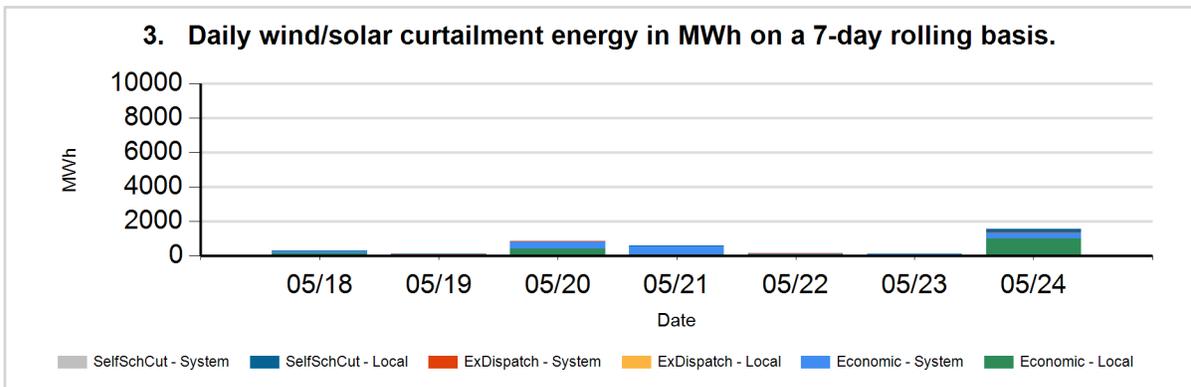
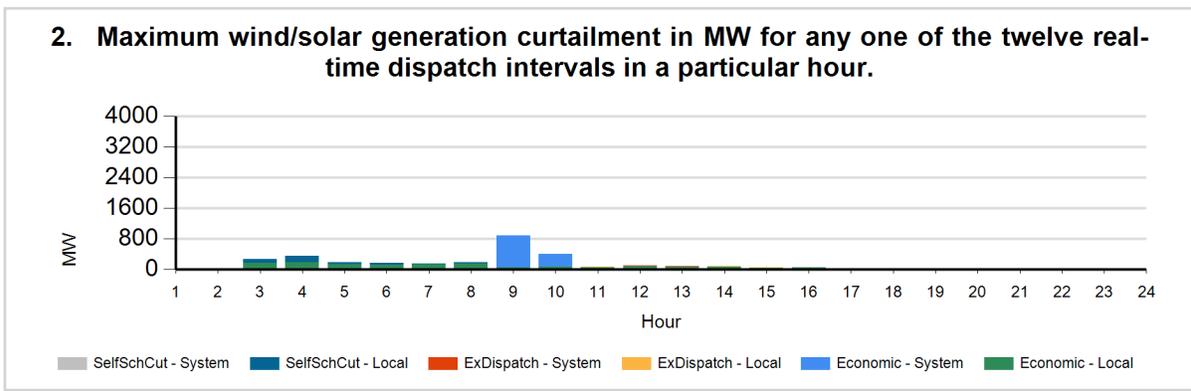
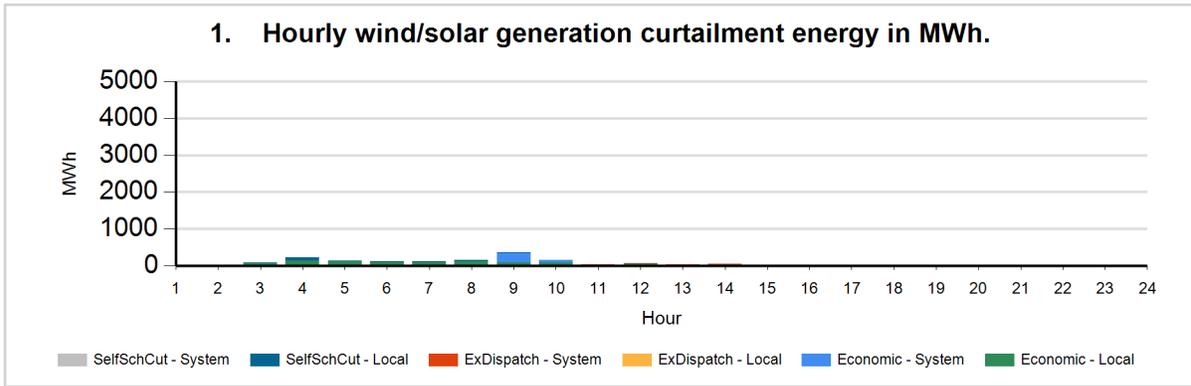
¹Only wind and solar resources can be reported in this manner because these resources have a forecast. Curtailment is defined as the difference between actual production and the forecast when actual production is less than the forecast.

²The Renewables Watch report provides daily actual renewable production within the ISO grid. It is available at: <http://www.caiso.com/green/renewableswatch.html>.

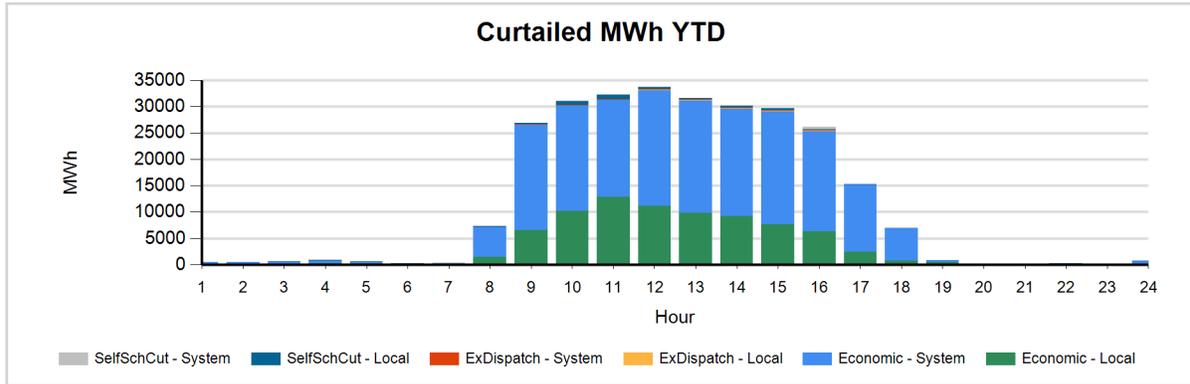
³Congestion occurs when available, least-cost energy cannot be delivered to some loads because transmission facilities do not have sufficient capacity to deliver the energy.

⁴For more information on oversupply conditions, please see: https://www.caiso.com/Documents/FlexibleResourcesHelpRenewables_FastFacts.pdf

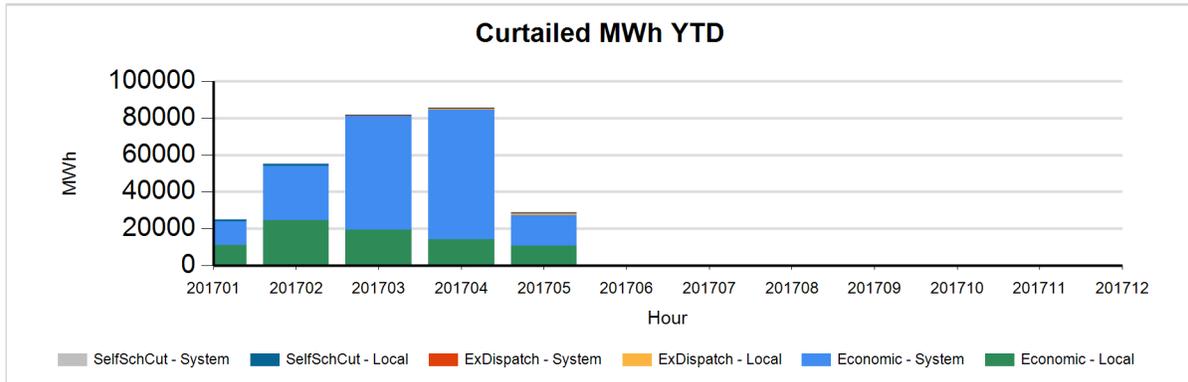
The following charts show the daily and 7-day rolling wind and solar curtailment by category, if any.



The following charts show hourly year to date wind and solar curtailment by category, if any.



The following charts show monthly year to date wind and solar curtailment by category, if any.



TYPE	YTD CURTAILED MWH
LocalEconomic	79,942
LocalExDispatch	1,093
LocalSelfSchCut	3,601
SystemEconomic	191,011
SystemExDispatch	313
SystemSelfSchCut	820
TOTAL	276,780

Data used to produce hourly chart

DATE	HOUR	CURT TYPE	REASON	FUEL TYPE	CURTAILED MWH	CURTAILED MW
05/24	3	Economic	Local	WIND	68	169
05/24	3	SelfSchCut	Local	WIND	12	99
05/24	4	Economic	Local	WIND	136	174
05/24	4	SelfSchCut	Local	WIND	80	179
05/24	5	Economic	Local	WIND	119	139
05/24	5	SelfSchCut	Local	WIND	12	48
05/24	6	Economic	Local	WIND	106	113
05/24	6	SelfSchCut	Local	WIND	13	49
05/24	7	Economic	Local	SOLR	1	7
05/24	7	Economic	Local	WIND	103	137
05/24	7	SelfSchCut	Local	SOLR	0	
05/24	7	SelfSchCut	Local	WIND	11	3
05/24	8	Economic	Local	SOLR	15	53
05/24	8	Economic	Local	WIND	100	100
05/24	8	ExDispatch	Local	SOLR	0	
05/24	8	ExDispatch	System	SOLR	0	
05/24	8	SelfSchCut	Local	SOLR	0	0
05/24	8	SelfSchCut	Local	WIND	31	35
05/24	9	Economic	Local	SOLR	24	0
05/24	9	Economic	Local	WIND	67	50
05/24	9	Economic	System	SOLR	269	826
05/24	9	ExDispatch	Local	SOLR	0	
05/24	9	ExDispatch	System	SOLR	0	
05/24	9	SelfSchCut	Local	WIND	7	
05/24	10	Economic	Local	SOLR	12	1
05/24	10	Economic	Local	WIND	68	59
05/24	10	Economic	System	SOLR	73	335
05/24	10	ExDispatch	Local	SOLR	0	
05/24	10	ExDispatch	System	SOLR	0	
05/24	11	Economic	Local	WIND	25	66
05/24	11	ExDispatch	Local	SOLR	1	3

05/24	11	ExDispatch	System	SOLR	2	
05/24	11	ExDispatch	System	WIND	0	
05/24	12	Economic	Local	WIND	65	92
05/24	12	ExDispatch	Local	SOLR	3	3
05/24	12	ExDispatch	System	SOLR	4	2
05/24	12	ExDispatch	System	WIND	0	0
05/24	13	Economic	Local	WIND	30	73
05/24	13	ExDispatch	Local	SOLR	1	
05/24	13	ExDispatch	System	SOLR	9	4
05/24	14	Economic	Local	WIND	41	75
05/24	14	ExDispatch	Local	SOLR	2	4
05/24	14	ExDispatch	System	SOLR	3	
05/24	15	Economic	Local	WIND	16	54
05/24	15	ExDispatch	Local	SOLR	2	0
05/24	15	ExDispatch	System	SOLR	2	
05/24	16	Economic	Local	WIND	10	45
05/24	19	Economic	System	SOLR	2	10

The information contained in this report is preliminary and subject to change without notice. No inference, decision or conclusion should be made based on the information in this report or any series of these reports. All values are hourly average unless otherwise stated. Questions about this report should be directed to Hong Zhou at hzhou@caiso.com.